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# F-615 **Food & Nutrition**

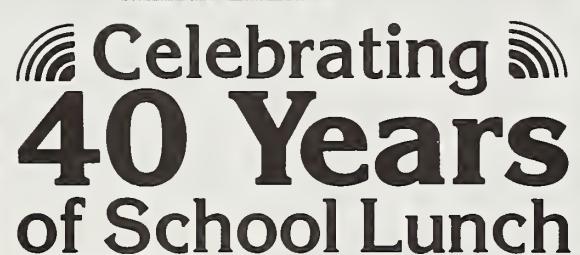
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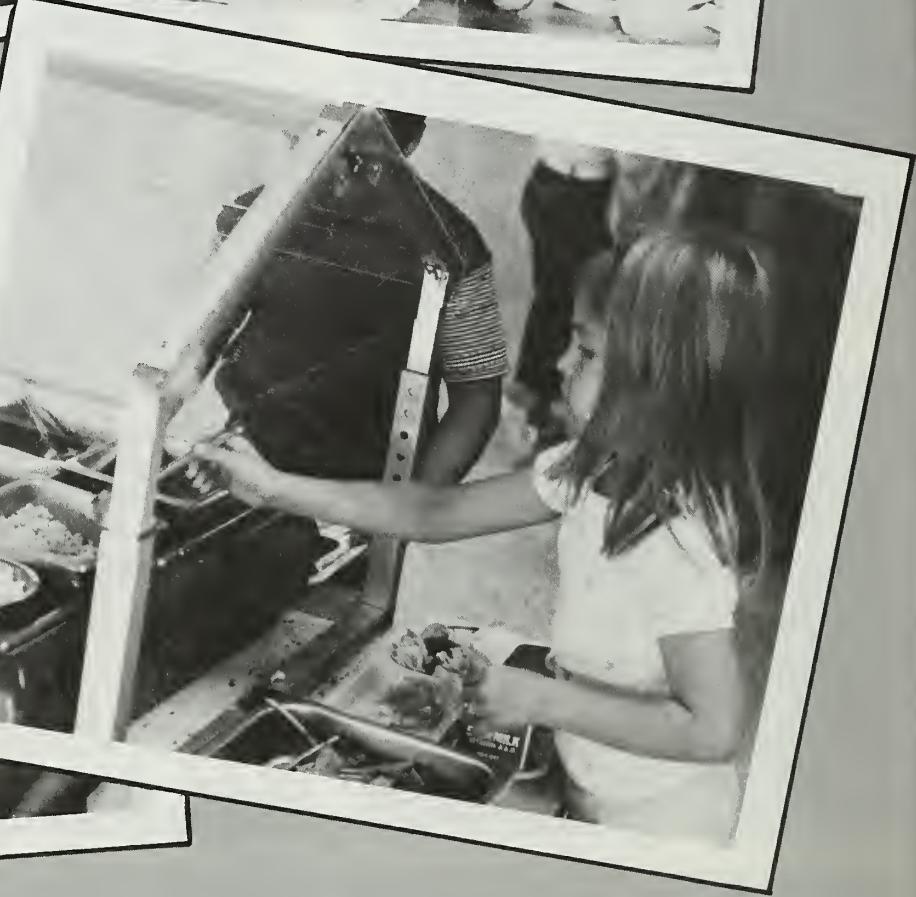
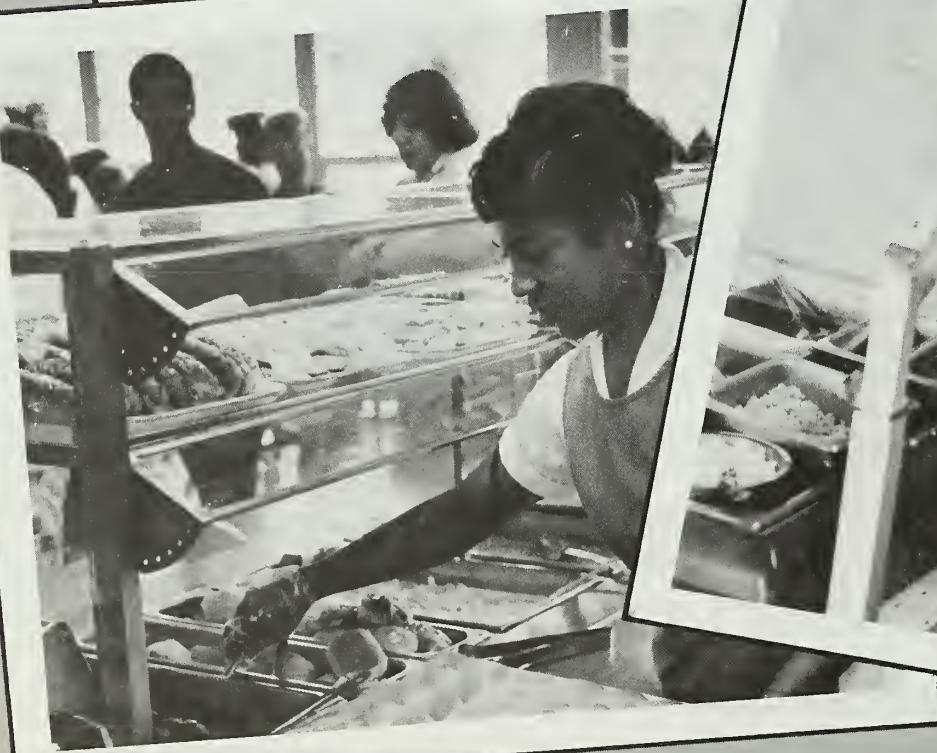
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October 1986 Volume 16 Number 4

# SPECIAL SCHOOL LUNCH ANNIVERSARY ISSUE



# Celebrating **40 Years** of School Lunch



**What's new in school lunch?**  
Compared to the early days, a great deal.

There's more variety in foods served, more attention to what students like and don't like, and more interest in teaching children about food and nutrition. There's also much more emphasis on "merchan-

dising" school meals and on improving and streamlining school lunch program management.

This year the National School Lunch Program celebrates its fortieth anniversary. In honor of this anniversary, we are devoting this issue of **FOOD AND NUTRITION** to school lunch, with articles that high-

light the work of several school lunch directors.

While these are just a few of the many school food service directors who have built successful lunch programs, their efforts illustrate the diversity, creativity, and professionalism that characterize school lunch in the 1980's.

# Variety and Choice Are Keys to Success In Cobb County

If you spent your early years washing pots and pans, making things "spic and span" might become a way of life. And that's exactly what has happened to Mary Nix, Cobb County, Georgia, school food service director, whose food service operation in metropolitan Atlanta sparkles and shines.

"By washing pots and pans in high school, I grew up dealing with school food service," Nix says. "So I can say that I've worked in literally every phase of the school lunch program."

A former president (1980-81) of the American School Food Service Association, Nix became director of food service in Cobb County in 1975. In 1980, she won the prestigious Silver Plate Award from the International Food Service Manufacturers Association for elementary and secondary schools in recognition of the quality of her food service. She has run out of wall space to hang all her awards.

"When I first started in Cobb County, we had a solid base to build upon," Nix says. "We focused on developing a system of accountability that would allow the school food managers to maintain their own style of leadership. We wanted them to have a simple system that would free them to manage their programs."

## Serves a fast-growing county

In Cobb, one of the nation's fastest growing counties, Nix has faced tremendous challenges. During her tenure, the school system has grown from 35,000 to 55,000 children, and the schools have moved from offering one menu to many choices.

More than 42,000 lunches are served at 68 schools each day. The schools average higher than 75-percent participation in the school



Mary Nix (left) has been food service director in Georgia's Cobb County for 11 years. Her award-winning program serves more than 42,000 lunches in 68 schools each day.



lunch program. Since less than 10 percent of the students receive free or reduced-price meals, creative Cobb managers prove you can break even with a limited amount of federal reimbursement.

To deal with the demands of running a large food service operation, Nix sets guidelines for budget, meal patterns, and productivity while delegating the responsibility for individual operations

to the school food service managers. She wants managers to develop programs specifically for their clients—the students.

"The emphasis is on developing controls at the point of delivery," she says. "The decisions I make are not as important as those made where the food is served. We provide technical assistance to help the food service managers implement programs that are



effective for their communities."

For example, the Cobb system does not have centralized menus. "We want every school to plan its own meals," Nix says, "because there's a big difference in preferences at each school."

#### Walton High is a good example

A good example of Nix's decentralized approach is Walton High School, a 1984 Georgia School of Excellence, located in an Atlanta suburb.

Walton offers a variety of food choices. Imagine a menu with rib-eye steaks, eggs benedict, grilled fish, "Buffalo" chicken wings, and a 50-item salad bar. These items, which sound more at home in a trendy restaurant than a school cafeteria, are only part of the variety and quality served to 1,500 students at Walton.

There are five serving lines, including a dinner line, where a traditional school lunch menu with at least two entrees is offered, and a specialty line that contains two types of pizzas. A short-order line offers hamburgers, foot-long hot dogs, chicken filets, and milkshakes. Another line has deli sandwich items, and students also have a variety of choices from a soup-and-salad line.

Special menus offer additional choices. Once a week the lunchroom has Mexican day featuring burritos stuffed with fillings students choose themselves. Crab salad is offered twice a week, and ethnic foods are served often.

Some of the other unusual foods served at Walton include pasta salads, kiwi fruit, fresh mushrooms, corn beef, bagels, sweet and sour pork, grilled liver, and french onion soup. Because there are a significant number of Jewish students and faculty, a number of Jewish foods are served during religious holidays.

"With as much variety as we serve, it's very difficult for finicky eaters not to find something they like," says Pat Trapanese, Walton food service manager.

#### Staff emphasizes nutrition education

Trapanese and her staff work with the faculty to emphasize nutrition education for the students. "In addition to working with coaches and preparing pre-game meals for athletes, we try to talk to students individually about nutrition," Trapanese says. "The students will remember the foods they enjoy, but it is up to us to teach them about

the nutrients the foods contain."

Trapanese thinks serving kids ought to be fun. "Because it's such hard work, we might as well enjoy it," she says.

"The staff is to be commended for the variety of foods they serve at Walton," Nix says. "You work hard to please high school students because they are familiar with the latest food trends. We've also worked to make gradual changes in the way foods are prepared by reducing the amount of fat and salt."

Food service workers use the batch cooking method to prepare food as it is needed. Most food items are prepared on site with very few leftovers. The staff carefully observes where items are picked up most frequently on the serving line. "Part of merchandising is knowing where to place certain food items for maximum exposure," Nix says.

#### Managers encouraged to stress quality

Mary Nix marches to her own beat. She has put into place ideas that were completely unorthodox because, as she likes to say, "we didn't know it wasn't supposed to work." For example, she encourages managers to use the more expensive brand-name product if it is of much better quality. She has found that the increase in cost for name brands will usually be covered by added food sales.

Nix is very choosy when it comes to using products and uses USDA commodities extensively. USDA-donated tomato paste, beef, cheese, and flour go into delicious homemade pizza. Donated sweet potatoes are used for sweet potato bars with toppings and sweet potatoes baked in homemade pie shells—both student favorites.

Nix has not followed the trend toward self-service that is popular in many areas of the Southeast. She prefers traditional serving lines because she feels they are faster, easier to clean up, and more sanitary. She also feels they make it easier to control portion size.

A key to the success of the Cobb County school food service is involving local managers in decision-making. Nix



## Modernizing Makes A Difference in Meridian, Idaho

Noreen Larsen has been food service director in Meridian, Idaho, for just 3 years. In that short time, she's managed to make changes that, as one state official puts it, "have rapidly moved Meridian into the 20th century."

Larsen was new to school food service when she first came to Meridian, although she had managed a hospital program before. "I wasn't sure how to start," she says, but she focused on increasing participation and balancing the books. District participation was 60 percent at best when she started.

Larsen's first attempt to attract more customers, she recalls, was to offer chocolate milk once a week to elementary students and more often to older children. She also switched from a mix to a bottled catsup. "These may seem like small changes," she says, "but they brought more kids into the lunch lines."

She next borrowed an idea from neighboring Boise district and began having student taste panels. Now students choose which brands they like. "This information is really valuable," says Larsen. "We really didn't know what they wanted. The students' preferences were usually different from the choices of teachers and staff."

Students suggested Larsen add more fresh fruits and vegetables, tossed salads, and fast-food-type items. She finds students accept these better than the casserole dishes previously offered.

### Participation has grown steadily

"We've seen participation grow steadily," Larsen says. She serves nearly 5,000 reimbursable lunches a day, up 1,000 since she started. She feels the most significant reason for improvement has been the addition of

self-service bars and the aggressive nutrition education program she uses to support them.

"Through nutrition education, we show the children how to make good choices," she says.

Larsen began adding self-serve bars 2 years ago, one school at a time, and expects to have them running at all 19 schools by the end of this school year. She first introduces salad bars, then adds potato, pasta, taco, deli, and hot dog bars.

Despite all these changes, she has managed to keep lunch costs within the students' reach. Lunches are an affordable \$.80 for elementary students and \$1.05 for high school students.

Putting in salad bars and teaching in classrooms has taken a lot of Larsen's time. She says computerizing many of her operations has freed time for these activities. In fact, Larsen made the move to computers at the same time she brought in the salad bars.

She had been interested in computers before she came to Meridian, she says, but had "zero experience" using them. She was prepared to spend plenty of time researching what she needed and how to set up the system. She was confident that, once installed, the computers could save time and money.

### Investment has been worthwhile

On inventories alone, the improvement is dramatic. When Larsen started at Meridian, one person had worked full time on the district's inventory. Even with full-time attention, the inven-

has an eight-member "Magic Committee" comprised of food service managers who serve without extra pay on a rotating, yearly basis.

They evaluate bids on products and make suggestions on equipment purchases and food service operations. The group recommends to the Cobb County school board what products to buy and helps evaluate products through taste tests.

"If we involve the managers, who are responsible for participation and plate waste, they become intent on improving the quality of their products," Nix says.

### Training is a high priority

Training is also an integral part of Mary Nix's management philosophy. Each school food manager must complete 180 hours of training, some equivalent to college coursework. Every employee must complete annually a minimum of 12 hours of training in nutrition, sanitation, food preparation, and public relations. There are also manager meetings devoted to program improvements.

Nix has gotten positive results from her training efforts. She says she has seen the pride level increase tremendously and the skill level of the food service managers improve. "The bottom line is that a program succeeds when the staff is excited about serving young people and committed to finding better ways to do it," she says.

"We've seen food service managers with average programs improve the quality of their systems when they and their staff developed enthusiasm and showed they cared about school food and the people they serve. There are many intangibles in the food service industry. But there's no substitute for enthusiasm!"

For more information, contact:

Mary Nix, Director  
Cobb County School Food Service  
P.O. Box 1088  
Marietta, Georgia 30061  
Telephone: (404) 426-3380

article by Steve Watson  
and Kent Taylor  
photos by Kent Taylor  
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tory report was completed only twice a year, and the information was outdated before Larsen saw it. "It was inefficient," she says, "and it was difficult to plan or do bid buying with that set up."

With the computer system now in place, Larsen can do a lot more than track inventory. She chose software that was easily adapted to her needs, with a little help from others in the district. She has been able to expand one program to keep track of vendor lists, billing, ordering, and purchasing.

The program also produces a report that calculates the cost of each item, and it will also tell which foods are most popular with students. It will even compute the average monthly cost for meals served.

Larsen uses a second computer program for working with applications for free and reduced-price meals. In addition to storing records and figuring eligibility, the program can print out lists of eligible students. Larsen sends these lists to each manager weekly.

She uses a third software package to prepare salary schedules and budgets, forecast expenses, and prepare spread sheets and graphs that help her identify trends and analyze data. The staff person whose time was previously devoted to tracking inventory manually now enters data into the computer and produces a variety of reports with it.

#### Cost comparisons help schools save

Much of the information in the reports is broken out by school and shared with the managers so they can compare their costs to other schools'. Larsen says managers can now see if they need to bring certain costs down and where they might cut expenses.

Larsen, too, cuts costs using information from the computer reports. With current inventory information available at all times, she can better calculate how much of any item she will need over the course of the year. She can use bid buying to cut her purchasing costs.

"It takes more time," she says, "but the savings are definitely worth it. I save between \$3.00 and \$5.00 per case."

Although the initial costs of acquiring a computer may seem high, Larsen feels the system pays for itself quickly. In addition to the savings realized from bid buying, other money is saved as a result of improved accounting. "We had a billing error from our dairy supplier, which we probably wouldn't have caught without the computer. The savings from finding that one error paid for our software."

Larsen cautions that computerization may not be for everyone. "You have to be really interested," she says, "or you could end up with a system you won't use. I recommend that anyone who is interested explore what other districts are doing. See if their system works and if they like it."

Larsen's future goal is to continue to increase participation. Larsen says she "won't be satisfied until it's 100 percent." Because she can rely on the computer, she expects to have the time to continue working with the students and her staff to get more students to buy lunch.

#### Ideas from other districts helpful

Larsen is looking for a way for a computer or cash register to relay participation and revenue data from each school directly to her computer. This would eliminate entering the data into her system and would increase accuracy. She's still exploring how to do it and hopes she'll find someone who has some suggestions.

"I've borrowed lots of ideas from other districts, and I'm always looking for something I can use. I don't want to re-invent the wheel. And if someone else can benefit from what I'm doing, that's just great."

For more information, contact:  
Noreen Larsen  
Food Service Director  
Meridian Joint School District #2  
911 Meridian Street  
Meridian, Idaho 83642  
Telephone: (208) 888-1761

article by Dee Amaden

## Changes Save Time And Win Customers In Phoenix Schools

When Dave Caldwell took over as food service director for the Washington School District in Phoenix 5 years ago, he made sweeping changes in the program. Applying principles he had used in the private sector, he set about building what is today a very large, popular, and financially sound food service operation.

"Coming here from a food service background at Greyhound Food Management and a number of restaurants, maybe my approach is not the same as someone brought up in school lunch," says Caldwell.

"We're always looking for ways to upgrade our product and at the same time make our program more cost effective in order to keep prices down." Many of the changes Caldwell has made do both. He feels the Washington District is fairly typical and that most lunch programs could adopt his ideas.

#### Changes simplify meal preparation

There are 21,000 students in the district's 32 schools. Five schools are junior highs with seventh and eighth grade only, and the rest are elementary schools with kindergarten through sixth grade. There are no high schools in the district.

When Caldwell became food service director, half of the schools had fully equipped kitchens where they prepared food for their students and for one other school.

Caldwell decided to have all schools serve lunches assembled on site using mostly heat-and-serve and convenience foods. This has simplified preparation, cut down on the amount of equipment needed, and dramatically

reduced labor costs.

While food costs are higher with the convenience foods, savings from the simplified preparation more than compensate for the increase. The heat-and-serve meals assure consistent quality at all schools and offer greater menu flexibility.

All of Caldwell's schools offer four entrees each day. Two of the entrees—peanut butter and jelly sandwiches and hamburgers—are offered daily. The other two entrees change from day to day.

On Monday, the entrees might be oven-baked chicken and Sloppy Joes; Tuesday, cheese enchiladas and corn dogs; Wednesday, bologna and cheese sandwiches and breaded fish; Thursday, chicken nuggets and spaghetti with meat sauce; Friday, pizza and tacos. The daily menu always includes a potato product, fruit juice, milk, tossed salad, and either a vegetable or fruit selection.

The added variety, Caldwell feels, pays off in greater participation. More than 65 percent of the students eat school meals. Eighty-seven percent of the meals served are sold at full price.

Giving students the freedom to serve themselves wherever possible saves labor costs and food. "We don't have a person on the line, for example, giving each child two pickle slices. Those who want pickle slices help themselves," says Caldwell.

#### Other improvements also save money

In addition to changes on the food line, a number of behind-the-scenes improvements make the lunch program more cost effective. For example, using disposable plates, cups, and utensils eliminates dishwashing equipment, saves labor costs, and has cut some kitchen utility bills in half. Limiting lunch ticket sales from daily to twice per week has cut clerical staff hours.

Staff time required to prepare meals has been reduced more than 50 percent, from as high as 54 staff hours per day in some schools to an average of 18 to 20 hours. The smaller staffs are more easily supervised so each manager oversees two or three schools in-



Every day is special for school lunch customers in Phoenix's Washington District, but barbecue days have added appeal. Students get to eat some of their favorites—like charcoaled hamburgers—outside on the lawn with their friends.



stead of one, resulting in a savings of more than 50 percent.

As the program becomes more streamlined and workers more experienced, manpower requirements continue to drop, Caldwell says. "In one school, we've got three employees serving lunch to 250 children, and they're only there a couple of hours."

#### Single vendor supplies food

The Washington School District awards an annual contract to a single vendor to supply virtually all the food

for the school year. Throughout the year, individual school managers deal directly with the vendor for deliveries to their schools.

With this arrangement, Caldwell says he is able to purchase at lower prices than with central purchasing from several vendors. In addition to the cost advantage, the ordering and billing is greatly simplified, and the food is delivered to each school, when needed.

The only foods now stored by the district are USDA commodities. Limiting stored items has enabled Caldwell

to turn back to the district central warehouse space, reduce the district warehouse staff, and significantly reduce the district's delivery costs.

The school district buys the best food it can. "The few pennies saved on a lesser product are a false economy," says Caldwell. "I believe you have to really merchandise your lunch, and it doesn't make any sense to put watered-down ketchup on a great french fry."

In addition to cost-conserving ideas, Caldwell has initiated several income-producing activities. The food service section caters school functions like graduation, luncheons, and parent-teacher association meetings.

#### There are many signs of success

Caldwell points to a number of indicators of the success of the Washington program:

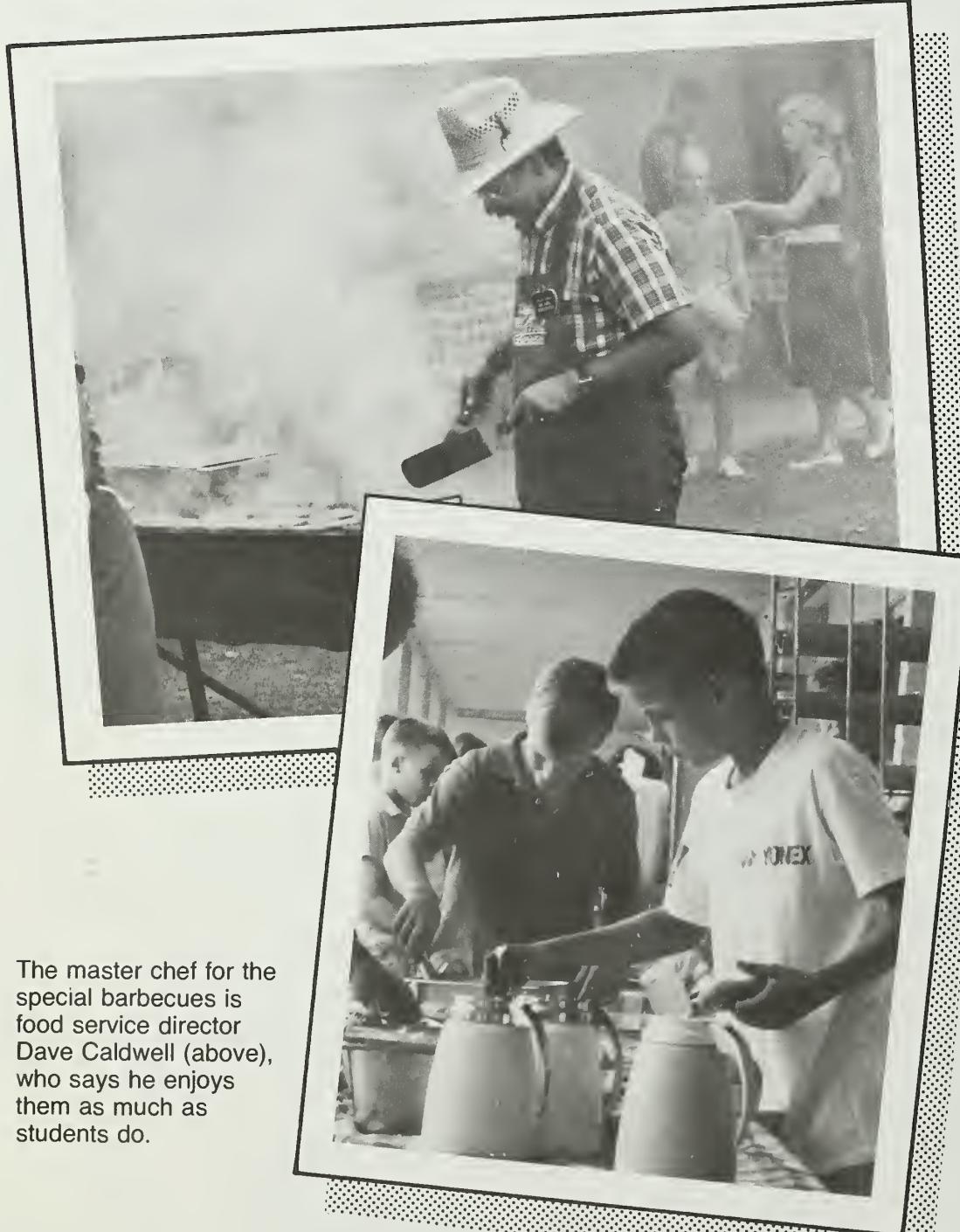
- Two-thirds of the district's children participate, even though only a small percentage receive free or reduced-price meals.
- The program covers its own food and labor costs and has kept the price of a full-cost lunch at 75 cents.
- Added choice and self-service have cut plate waste dramatically. "Our garbage cans are full of paper," says Caldwell, "not food."

Caldwell expects to add to these accomplishments next year. "I don't think any one thing we're doing is unique," he says. "You just have to keep track of what other schools are doing and take and use those ideas that work for you."

For more information contact:  
Dave Caldwell  
Director, Food Service  
Washington School District #6  
8610 N. 19th Ave  
Phoenix, Arizona 85021  
Telephone: (602) 864-2665

article and photos  
by Tino Serrano

(Note: The Washington School District was one of the original school districts that participated in the nutrient standard menu planning project described on page 11 of this issue.)



The master chef for the special barbecues is food service director Dave Caldwell (above), who says he enjoys them as much as students do.

## Test Kitchens Insure Quality School Lunches

Over the years, school lunch directors have become increasingly sensitive to the likes and dislikes of their student customers. Just as food manufacturers and distributors put time and effort into testing new items before putting them on the market, many school food service people are testing foods before introducing them in their lunch programs.

Two test kitchens in the Southeast—a county-operated kitchen in Louisville, Kentucky, and a state-run kitchen in Raleigh, North Carolina—are good examples of innovative approaches to food testing and food service training.

### Louisville kitchen is a recent addition

The test kitchen and learning center in Louisville is part of the Jefferson County school system. It was the idea of food service director Jay Caton, who saw a need for better quality control in school meals.

"We needed a place to test and compare food samples for consistency and acceptability," he explains. "With 135 school locations, it's difficult to have standard quality throughout our system, especially since we have a relatively small field staff of consultants for the schools. We also needed a place for hands-on experience and training on food preparation, sanitation, and safety."

Completed in 1985, the test kitchen is part of a large classroom that can be divided into three sections. Up to 100 people can attend classroom training while 25 are in the test kitchen.

Before the test kitchen existed, food service staff tested food samples at each school. Now food samples are picked up at a number of schools, brought into the test kitchen, and analyzed for quality.

"Introducing new products is one of the most important functions of our test kitchen," says Cheryl Sturgeon,



This poster from Louisville reflects the goal of the food service staff: to serve meals that are both good for and popular with the students.

coordinator of food service operations for the Jefferson County schools.

During what's called "happy food service hour," a monthly event at the test kitchen, food brokers and manufacturers show off their products to local school food managers. "In the past," says Sturgeon, "our managers had no place to see or test new products. Now they can come to happy food service hour and be updated on the latest food trends."

### Test equipment as well as products

Product testing goes on throughout the year. "In March," says Sturgeon, "we may decide to test all french-fry products that are approved for the schools." Evaluation panels include school and state food service personnel, parents, and of course, students.

"We have to be sure that the students themselves have a part in determining food quality for their meals," Sturgeon says.

Private industry has been generous in donating food service equipment and in providing representatives for equipment maintenance seminars. A donated video camera is used to tape sessions for employees unable to come in for training.

"Not only do we stay up to date on

the latest food trends, but we also test the latest in kitchen equipment," says Sturgeon. "For example, we have a tilting braising pan, which we have ordered for some of our larger kitchens, that eliminates the need for large ranges."

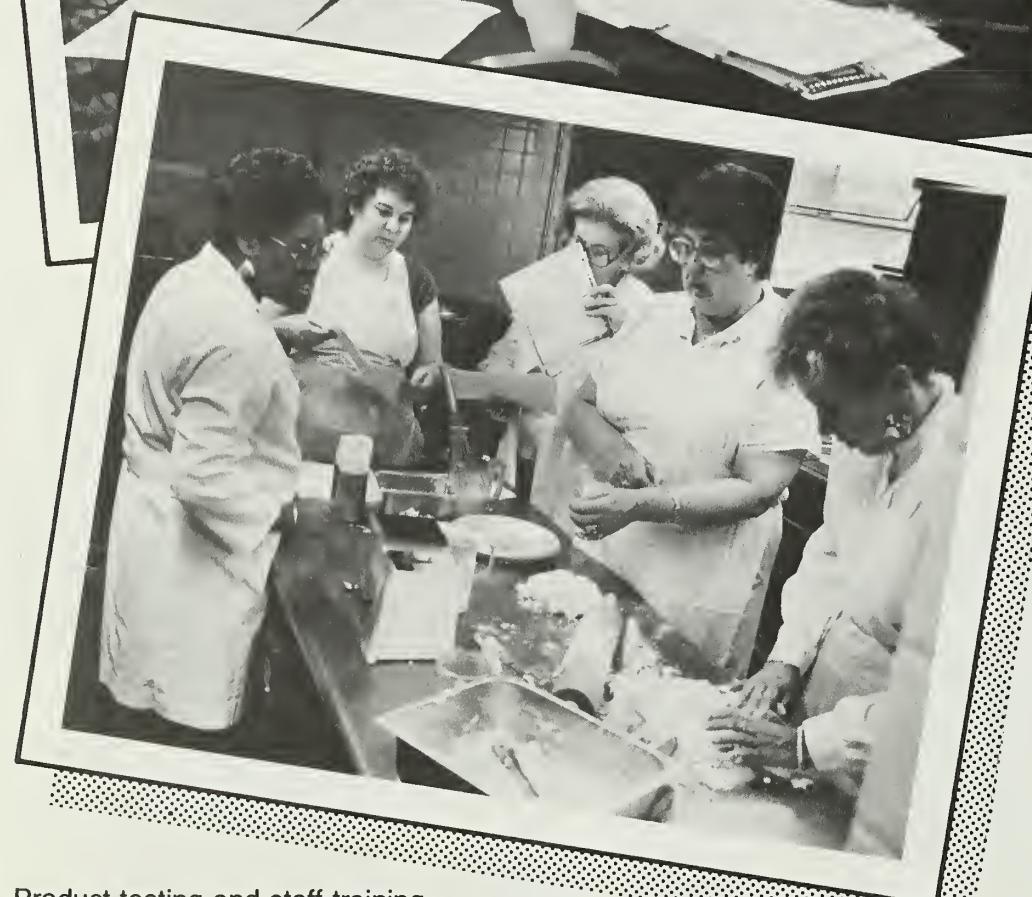
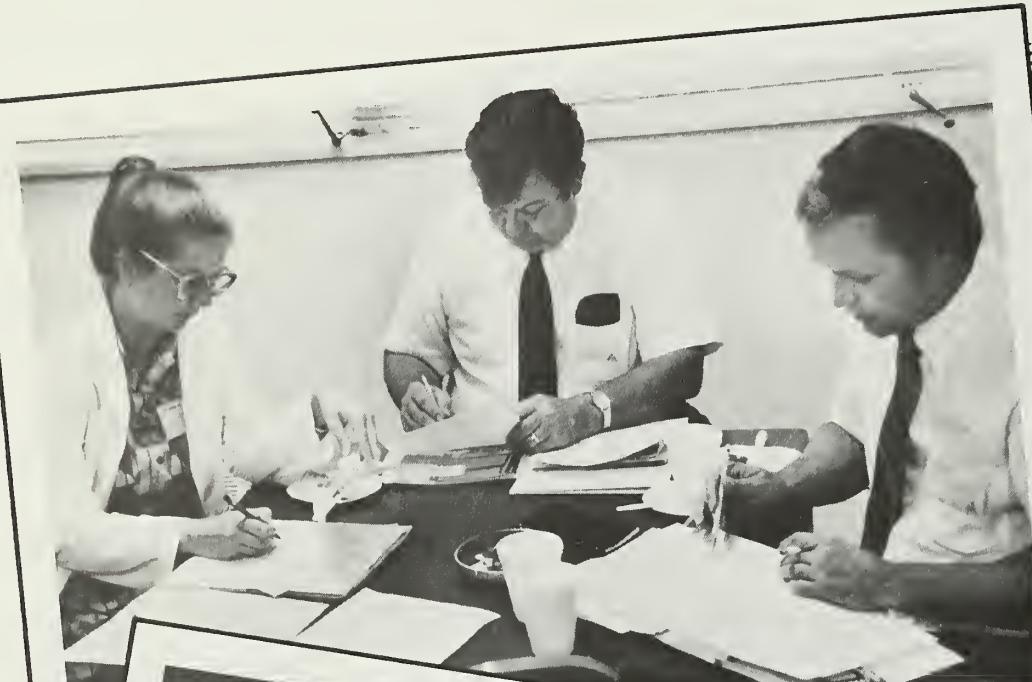
School food managers are required to take training each year at the test kitchen. Along with courses on food and equipment, there is instruction on stress reduction, time management, and building a positive self-image. Local chefs conduct sessions on merchandising and using garnishes. As an incentive to participate, managers can earn bonus pay for completing optional training.

The kitchen is also used to test new recipes or modify traditional ones. The goal is to insure consistent meal quality and to minimize costs while making meals more acceptable to students.

### Adding variety is also a goal

"We need to reach out to our customers without jeopardizing nutrition," says Jay Caton. "One of the challenges today is to maintain high quality with the best tasting product and provide it at a reasonable cost to the paying child."

Caton feels the offer versus serve



Product testing and staff training are easier with the test kitchens. Here, a team works in the Raleigh kitchen.

option, which allows students to choose three or more of the five available food items, is one of the best ideas to come into school food service.

"Another good idea," he says, "is the use of USDA commodities for preparing a la carte items. For example, we process figs, honey, and flour into individually wrapped fig bars that the kids really like. We need to recognize that not every child will want a full meal every day, and we must insure that nutritious choices are available."

Students benefit from the test kitchen because of the variety of products that are put on the menu after the testing process. "Managers have more

items for their own individual choice menus as a result of what we show them in the test kitchen," says Brenda Richardson, coordinator of food procurement.

"This is important since we have found that students in one part of the county may have completely different tastes from the rest of the area."

While schools are competing with fast food restaurants and have to follow fast food trends, Richardson says, many students are also placing more emphasis on 'light' foods. "For instance," she says, "we have healthy a la carte items such as all-natural yogurt to go along with our salad bars.

"We also have less salt and fat in our cooking, serve multi-grain products, and have cut back on desserts. Using tilting braising pans reduces the amount of deep-fat frying while keeping in more nutrients."

Richardson has helped implement a Fitness and Nutrition (F.A.N.) Club in Jefferson County middle schools. Students assess their physical fitness levels and develop individual plans to meet their nutritional needs.

The schools have incorporated nutrition education activities into a number of subject areas. In some activities, for example, students keep diaries of what they eat, count calories, and make charts of physical fitness levels. They also learn about the foods of other cultures, make cookbooks and plan menus, and learn about the nutrient content of various foods.

### Raleigh kitchen is also thriving

North Carolina's state kitchen, like Jefferson County's, helps local food service directors meet the demands of sophisticated consumer taste preferences. "The students are our customers, and they keep us in business," says North Carolina state child nutrition director John Murphy. "We want to meet their needs, and our test kitchen helps us do that."

Murphy admits that commercial food service is aggressive in vying for school-aged customers. He depends on the training lab to keep staff competitive in serving quality meals in North Carolina schools.

Located at the state child nutrition office in Raleigh, the test kitchen was set up in 1980 to test and develop standardized recipes for school cafeterias, and to train school food service staff in food preparation and equipment use and care.

Workshops are held once a month on topics such as merchandising, efficient quantity food production, and special service arrangements, such as salad bars. The lab is designed to accommodate 8 to 11 persons at one time. Usually 21 people attend the workshops, and hands-on lab experiences are rotated among two groups.

Training coordinator Paula Tillman conducts the 2- to 3-day sessions. "We

# NUTRIENT STANDARD MENU PLANNING

operate under the train-the-trainer concept—that is, participants go back and teach others about what they learned. We use the lab as a training station to put innovations into practice. We will test an idea here before it is tried in a school," Tillman says.

The North Carolina test kitchen was used to test recipes for the innovative "School Recipe Portfolio," developed by eight Southeastern states. This full-color merchandising manual of standardized school recipes shows how food should look and be displayed on the serving line. All recipes chosen for the book were tested in the lab and adjusted for proper yield, quality, and taste.

## Training builds skills and morale

Both Murphy and Caton stress that managing and caring about people are very important factors in having an effective child nutrition program. They believe there has to be a sense of participation for those who work in food service. Workers must feel that they are professionals with specific skills who are performing a major service in education.

"We must manage our resources so that people are rewarded for their work," says Caton. "We want our test kitchen to supplement an expanded professional growth program for employees because the opportunity to improve one's skills is basic.

"Workers' ideas and commitment mean more in the long run than any leadership I could give. If it doesn't happen in the schools, it's not going to happen at all."

For more information, contact:

Jay Caton, Director  
Jefferson County School Food Service  
3001 Crittenden Drive  
Louisville, Kentucky 40209  
Telephone: (502) 456-3190

John Murphy, Director  
Division of Child Nutrition  
State Department of Public Instruction  
Education Building  
Raleigh, North Carolina 27611  
Telephone: (919) 733-7162

article and photos  
by Kent Taylor  
October 1986

## Special Project Tests New Way To Plan Meals

Everything's up to date in Kansas City (Missouri)—not only in the lyrics of the Broadway musical but at Hickman Mills Consolidated School District 1, where food service staff are pleased with their alternative lunch program.

Hickman Mills is one of seven districts nationwide still involved in the third year of a pilot project that began in school year 1983-84 with 18 participating school districts across the country. That project—Nutrient Standard Menu Planning—offered selected districts an opportunity to test an alternative to the time-honored school lunch meal pattern.

### Meals are planned in different way

Meal pattern planning is currently used by all schools participating in the National School Lunch Program with the exception of those testing the nutrient standard.

With the meal pattern approach, USDA requires school lunch managers to include in each lunch a specified amount of food from each of four food components—meat/meat alternate, vegetable/fruit, bread/bread alternate, and milk. Each lunch includes two servings from the vegetable/fruit component so a complete meal contains five food items.

The nutrient standard system does not use meal patterns. Instead, meals are evaluated for nutrient content. The goal is to meet one-third of the child's Recommended Dietary Allowance (RDA) for eight key nutrients, averaged over the 5-day school week.

If a computer analysis reveals a shortage of one of the nutrients during a particular week, district school lunch directors adjust the menus, recipes, and/or portion sizes to meet the nutrient standard. Standardized menus and recipes are essential to the plan.

As Alberta Frost, director of FNS' Nutrition and Technical Services Division, explains, all of the eight analyzed

nutrients are essential for growth and development. They include protein, calcium, iron, vitamin C, vitamin A, thiamin, and riboflavin. Foods containing these nutrients typically contain other nutrients as well. Food energy is analyzed but not monitored.

### Introduced in nine Hickman Mills schools

Hickman Mills school food service director Betty Culley sees both advantages and disadvantages to using the nutrient standard system. On balance, however, she's enthusiastic about the system and feels it offers a viable alternative for schools suited to using it.

Nine of the 11 Hickman Mills schools—seven elementary and two junior high schools—are participating in the pilot project. When the nutrient standard system was introduced, the district used brochures and school newsletters to inform teachers, students, parents, and the community that the new alternative was being tested.

According to representatives from FNS' Mountain Plains regional office who have monitored the project, cafeteria staff were resistant at first but are now supportive, and student acceptance has been good.



# NUTRIENT STANDARD MENU PLANNING NUTRIENT STAN

FNS staff have noticed a number of changes in the district's program as a result of the new approach. The district uses increased quantities of commodities such as peanut butter and raisins (to help meet the iron requirement) and increased quantities of fruits and vegetables. On the other hand, use of meat and meat alternates has decreased, as has the number of bread servings.

Initially, FNS staff helped train local staff. At that time, the Missouri Department of Elementary and Secondary Education closely monitored the new program on a weekly basis. They now make a monitoring visit and audit the program once a year, forwarding their reports to the FNS regional office.

Actual testing ended last year, but Hickman Mills is still refining the program to suit its needs.

## Computer analysis is key to system

One of the benefits of the project for Hickman Mills and other participating districts was an opportunity to work with computers in a new way.

While a few districts did not use computers in the project, most used either mainframe or microcomputers together with software developed by USDA. Schools using computers had the most success with nutrient standard planning; districts testing the manual method found it was not practical because it was tedious and error prone.

Along with software, USDA provided a data base that included information on the nutrient content of more than 1,100 frequently used foods. District supervisors added to the data base information on other foods their schools use, including commercially processed foods.

If necessary, districts modified the USDA software for use with their equipment. Modifications were needed primarily in districts with mainframe computers. Betty Culley adapted the software for use with a Radio Shack Model 16 computer. She says the computer has not only helped her with meal planning but also with the documentation needed for the nutrient standard project.

While the nutrient standard system

has worked well in districts like Hickman Mills, it's not likely to be offered indiscriminately as an option to all schools because of its unique requirements.

As Stella Nash of Mountain Plains explains, the nutrient standard requires standardized recipes, good computer support, and specialized software. It also requires time and money for training and implementation. It doesn't, for example, lend itself readily to one-cook schools. It also doesn't work very well in schools that offer students a wide variety of menu choices, such as schools offering salad bars or bag lunches.

Advantages include added flexibility in using recipes and ingredients and an opportunity to serve a greater variety of locally popular foods. Because schools use weekly averaging with the nutrient standard approach, they can also make changes that may save on food costs.

Serving smaller portions of meat or meat alternates and fewer bread servings per week has made a difference at Hickman Mills. District schools have saved as much as 7 cents per serving for chili (27 cents per serving under the traditional meal pattern, 20 cents per serving now) and 12 cents per serving for spaghetti sauce (26 cents formerly, 14 cents now).

## Considerable time required at first

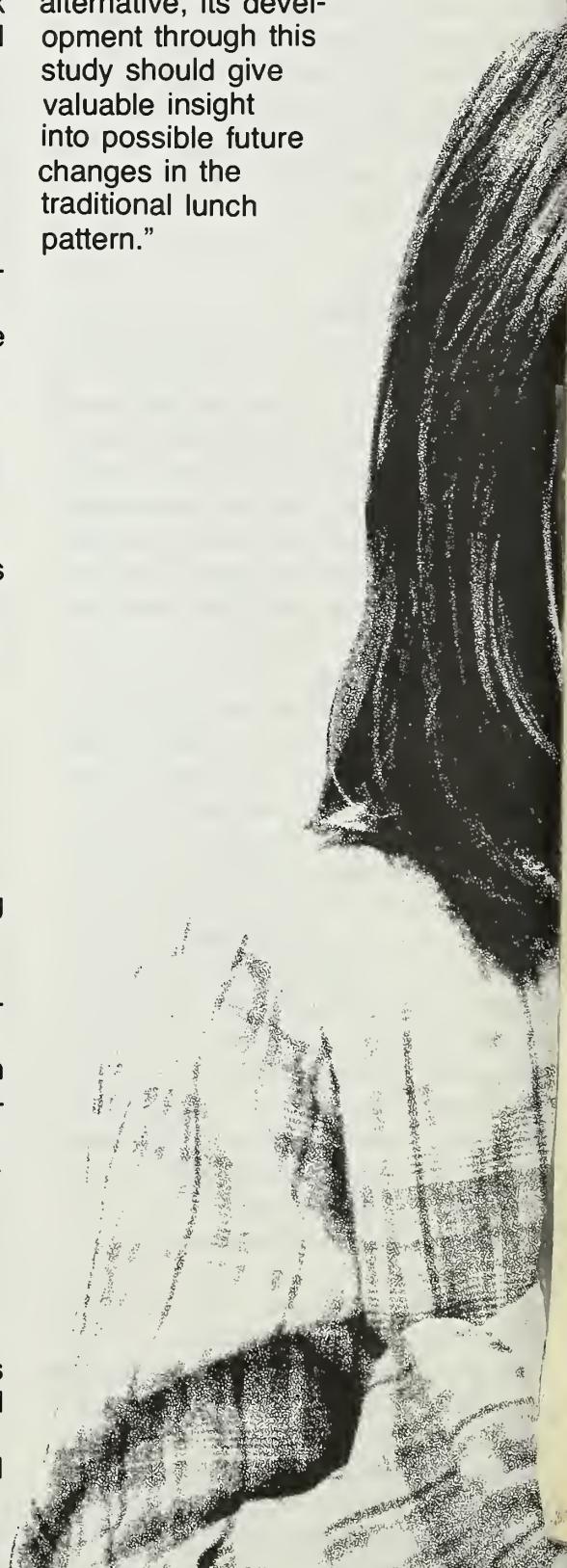
Culley echoes the need for spending time preparing materials and training staff. "You may think your recipes are already standardized," she says. "However, you'll find that a lot of the basic foods you serve—such as combination salad or cole slaw—are prepared without an actual recipe. And homemade bread recipes vary widely. As their ingredients differ, so do the nutrient contents."

Culley had to narrow down her recipe file initially, deciding which of several similar recipes she wanted to enter into the system. Portion control was suddenly vital. A recipe yield—in actual preparation—was sometimes not correct for the portion control method, and adjustments had to be made.

Menu planning, she has found, is more time consuming for nutrient

standard meals than for lunches based on meal pattern requirements. "But," says Culley, "the nutrient standard plan has given our program added nutritional integrity in the community. Also our menus are now more acceptable to students than those sometimes allowed under meal pattern planning.

"It is my opinion," she says, "that even if nutrient standard doesn't become a general alternative, its development through this study should give valuable insight into possible future changes in the traditional lunch pattern."



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"It is my opinion," she says, "that even if nutrient standard doesn't become a general alternative, its development through this study should give valuable insight into possible future changes in the traditional lunch pattern."

By participating in the study, Culley and her staff will help USDA assess the effectiveness of the nutrient standard system. Among other things, the test at Hickman Mills has shown that:

- Kansas City schools could more than adequately meet protein needs at a significantly reduced cost;
- although the number of bread servings per week was reduced, weekly nutrient needs were still met;

• there was an increased concentration on meeting the iron requirement—probably not always met adequately by school lunch pattern meals;

• in winter, when frozen vegetables were used more frequently than fresh, adjustments for vitamin A content were sometimes required.

Added flexibility had both pros and cons for Culley. The "good news" was the ease of menu planning with standardized recipes and computer assistance. The "bad news" was the need to plan further ahead and to be more specific about foods on hand. Leftovers were not as easy to use.

Nancy Lovely of the Missouri staff agrees with Culley's assessment that the pilot project has been worthwhile. "It's a good alternative," she says. "We should have it available for our schools. We like the idea of having an option in school meal planning."

For Lovely as well as Culley, the project initially involved extra work. "Monitoring was more intense," she says. "It was a bit more complex, since we had more to look at. A year into the project, we were still finding things we needed to check. Even minor errors in food coding could affect the nutrient analysis. Sour pickles, for example, had more iron than dill pickles. So we'd sometimes go back and take another look at the actual recipes.

"On balance, though, our reaction is positive. Nutrient standard is an option we'd like to see offered more widely."

Missouri authorities and Hickman Mills staff are grateful for the opportunity to participate in the pilot project. From the perspective of their 3-year experience, the study has been profitable.

For more information, contact: Betty Culley, Food Service Director Consolidated School District #1 9000 Old Santa Fe Road Kansas City, Missouri 64138 Telephone: (816) 761-6661

Nancy Lovely, Supervisor School Food Service Missouri Department of Elementary and Secondary Education P.O. Box 480 Jefferson City, Missouri 65102 Telephone: (314) 751-6466

article by Joanne Widner

## Making the Switch To Nutrient Standard Menu Planning...

Adapting to nutrient standard menu planning was a process that varied in each of the schools participating in the pilot project. Clara McIver, food service director for the Huntington, Long Island, schools, came to the project well prepared by her professional background as a nutritionist. She worked closely with state and federal staff who reviewed the project in the Huntington schools.

During an interview with Wini Scheffler of the Food and Nutrition Service's public information staff, McIver offered personal insights into why she chose to participate, how she managed the technical challenge, and what she thinks of the results.

McIver's district includes a high school, junior high school, and five elementary schools serving a total of 4,500 children. In addition, under a shared service concept, she manages school lunch programs in the neighboring community of Harborfield. Harborfield schools did not take part in the pilot project.

**Q** When you were advised of the pilot study by the New York State Department of Education, you chose to participate, even though it would mean changing a comfortable routine. What motivated you to take on the challenge?

**A** As a nutritionist, I was interested in measuring more precisely whether our lunches were meeting one-third of the Recommended Dietary Allowance (RDA) of nutrients. Especially at the elementary level where the menus were simple, I was concerned that children often did not eat vegetables, except those served raw or in soup. I thought the nutrient standard would give us greater flexibility to offer foods they like that also supplied the needed nutrients. I also had an ulterior motive. I saw the need to automate more of our management functions, and participating in the study meant acquiring my own computer.



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**Q** What were the problems in adopting a complex new system of meal planning?

**A** We had to switch to completely computerized planning and that involved a horrendous amount of work as well as intensive staff training.

The biggest challenge was to enter all our recipes into the software provided by USDA. When I began reviewing the recipes and their yield, I was surprised to find that the taste and yield varied among kitchens. It turned out that institutional cooks share the tendency most of us have—after we've made a dish repeatedly, we are less likely to follow the recipe exactly.

Just as we abandon teaspoon measures for a pinch or sprinkle, they might substitute a handful for half a cup. We had to instruct all the cooks in the district to use the precise ingredients and amounts listed in the recipes.

We also had to get information from all our vendors as to the nutrients in the processed foods we purchase, an even harder task. Fortunately, the data base from USDA contains the nutrient content of most of the foods we commonly use.

**Q** Some schools dropped out of the pilot study, finding it too time-consuming or otherwise unsuitable for their districts. What would you say are the requirements for successfully adopting the nutrient standard approach?

**A** One thing that helped us was to introduce nutrient standard planning gradually. I started at the high school level because my office is there and I could provide close supervision. I found three factors to be essential.

First, you have to have the computer equipment and expertise within your district. The food service people who review our programs know what they need as output, but they can't help a lot on what must be put in.

The first thing I did was ask our district computer coordinator to recommend one of the brightest kids in the computer class to help me. The boy, Bill Deegan, did a super job. Bill even



modified the program to suit our needs. For instance, he adjusted it to automatically enter items offered every day. The job was a good opportunity for Bill, as well. The work became so interesting to him that he decided to specialize in computer engineering when he enters college this September. I have hired another student to replace him.

The second factor is a willingness to spend a lot of time checking to ensure menu and recipe files are uniform and correctly coded.

Finally, you have to devote time, effort, and money to thorough in-service training. This includes not only working with the managers, cooks, and bakers, but ensuring that cashiers know which selections may be counted as a meal.

**Q** Did you find it necessary to make any adjustments in the lunch program?

**A** Yes, we made changes in the way we offer lunches to students. For some time, we've used the offer versus serve option, which allows students to refuse part of the meal, although they still pay full price.

In schools using meal patterns, offer versus serve allows students to take as few as three of the five food items

that make up the meal. For example, on a day hamburgers are served, a student could take a hamburger on a bun, a half-pint of milk, and have three of the five required food items—meat, bread, and milk.

With nutrient standard, however, students must take a certain number of menu items. During the first 2 years we participated in the nutrient standard project, children had to take at least three menu items under offer versus serve.

This meant that in a nutrient standard school, a child selecting a hamburger on a bun would have to take two other items—milk, for instance, and dessert—because the hamburger and bun together were one menu item. This forced some children to take more food than they would with the meal pattern, and the result was increased waste and expense.

A year ago last spring, a team of federal and state monitors visited the district to survey on site what children took and ate. Instead of a straight average of the choices the children could take, we did a weighted average based on how many of each item children were actually taking.

As a result of this survey and reports from other schools, USDA began allowing nutrient standard districts to let children take as few as two menu items, as long as one was the entree. This makes sense because with nutri-

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ent standard the entree contains the major portion of the nutrient content of the lunch. And the entree plus one other item, such as milk, provides an adequate lunch.

Of course, we encourage children to take more than two items because the more items taken, the higher the nutritional content.

Recently, we asked parents from the school's nutrition committee to repeat the survey of what children were eating. We found selections were much the same as a year earlier.

**Q** Has your overall experience been positive, then?

**A** Definitely. Once I had the system in the high school functioning, I asked to extend it the second year to the other six schools in the district. I see several advantages.

For one thing, it has improved meal planning. We know we are serving one-third of the RDA. If the computer analysis shows that the menus fail to meet the standard for any nutrient, I adjust them so they will.

However, because I am a nutritionist, there's not a lot of trial and error in menu planning. For instance, I'm conscious of the need to make a special effort to include enough vitamin C and

iron. We analyze and adjust the menus for the month in a single morning.

We can also introduce more variety into meals because foods are selected for their nutritional contribution rather than to meet a mandatory meal pattern. All menu items are evaluated regardless of their role in the meal or the portion size.

Being more flexible also makes it easier to involve students in the lunch program. For instance, the youth advisory council recently planned an "Eskimo Day" featuring a complete cold menu of salads—chicken, tuna, fruits, and vegetables—followed by an ice cream cone dessert.

Other promotions sponsored by the council were Florida Citrus Day and Deli Day. Student council members worked with their faculty advisor, art teacher Linda Lutkenhaus, on publicity and decorations. They helped prepare and serve the meals and clean up afterwards.

These activities strengthen our program. More students participate when they see that their ideas count, and higher participation means more income. When we shifted to the nutrient standard, this increase was most noticeable in the elementary schools. Participation went from 50 percent to between 60 and 78 percent. That is

high for a school district in which only 13 percent of the lunches are served free or at reduced price.

My goal since I came here has been to teach not only the children, but also their parents, about nutrition. The nutrient standard has given a boost to nutrition education. My staff generated a lot of interest by enlarging and posting a printout of the nutrient content of common menu items.

The school community, parents, and administrators now realize child nutrition is more than pushing food over the counter. After we started with the nutrient standard, the board of education agreed to make nutrition part of the kindergarten through sixth grade curriculum.

Another advantage of the nutrient standard is that program management has benefited from the introduction of automation. We began with USDA software and an Apple computer on loan from the high school computer lab. Last year, I acquired an IBM computer and use it for nutrient analysis and meal planning.

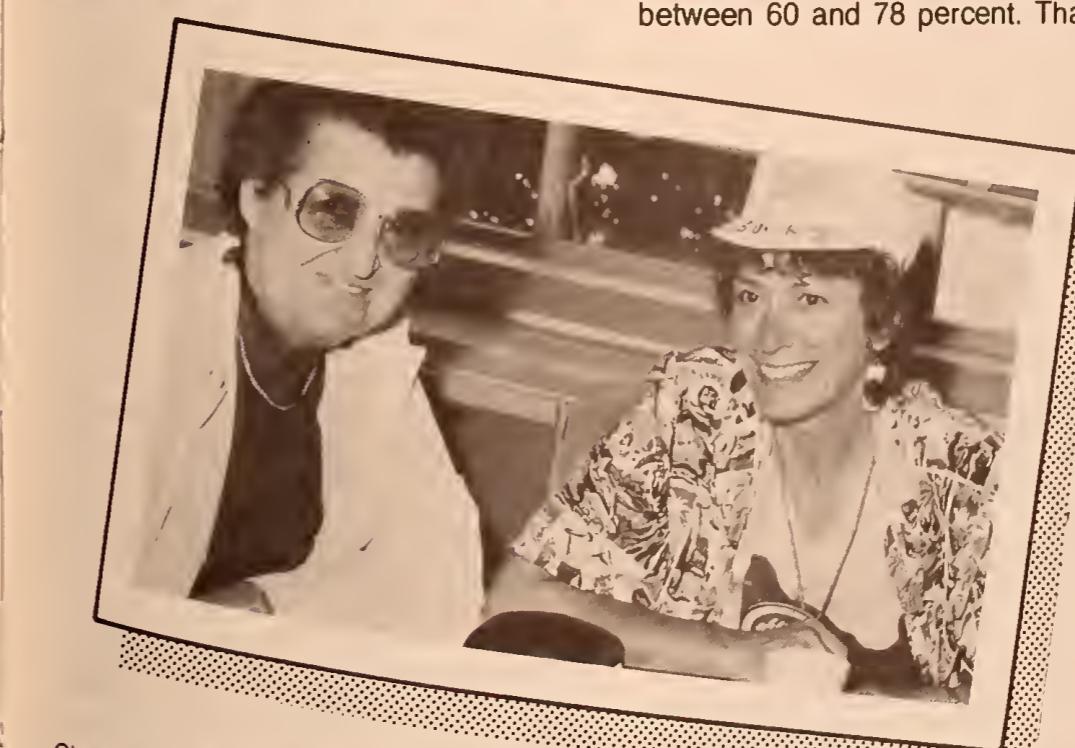
I use it for other administrative purposes also. Every month, using a program Bill developed, I key in our bills, payroll costs, nonfood costs, and income, by category. The computer gives me year-to-date expenses and income, and calculates meals per labor hour, average meal cost, average meal income ... almost anything I need.

**Q** In the 3 years you have participated in the study have you been satisfied with the level of technical assistance provided?

**A** Yes, I found both state and federal personnel to be very supportive. I feel comfortable knowing people really want us to succeed.

For more information, contact:  
Clara McIver  
Food Service Director  
Huntington Union Free School District  
P.O. Box 1500  
Huntington, New York 11743  
Telephone: (516) 673-2107

interview and photos  
by Wini Scheffler



Clara McIver (left) and food service manager Eleanor Bratton talk about using nutrient standard menu planning.

# Students Celebrate School Lunch in Style

This past spring, third and fourth graders at Marston Elementary School in Hampton, New Hampshire, found an unusual way to celebrate the fortieth anniversary of the National School Lunch Program.

They took a simulated spin in a time machine with special menus and activities arranged by schoolmates to capture the flavor of three decades in school lunch history—the 1940's, the '60s, and the '80s. Each of three shifts of students to pass through the lunch line was served a distinct menu characteristic of one of those decades.

## First group got a taste of the '40s

The first children in line for the special anniversary lunch had a typical 1946 menu. While the Andrews Sisters, Artie Shaw, and Glenn Miller crooned in the background, the fourth grade hosts explained a collage they had assembled of fashion, sayings, and celebrities from the postwar years. They also briefed their schoolmates on the early years of the school lunch program.

Each table was supplied with a bowl of peanut butter to spread on homemade whole wheat bread and a bottle of chocolate syrup for their milk and ice cream dessert. The main course was a macaroni-and-beef casserole and green beans.

Ruth Osgood, a guest of honor, felt right at home. From 1945 to 1949, she was part of the staff that prepared meals for the town's three schools.

"We started with a 5-cent cup of cocoa," she recalls. "Later, we added soup and bread and butter. When the federal government began providing support in 1946, we adopted the nutrition standards used nationwide. A complete meal cost only 15 cents, and any children who couldn't pay the price could earn their lunches by helping out in the kitchen."

Students are no longer allowed to work for the cost of their meals, but free and reduced-price lunches have long been available to children from low-income families.

## Menus from 1966 and 1986 were next

The next group of children ate a 35-cent 1960's menu to the tunes of the Monkees, the Beatles, and the Beach boys. Their trays were filled with whipped potatoes, Sloppy Joes, green beans, homemade rolls, peaches, and milk.

They heard their schoolmates comment on the 'neat' and 'groovy' world of the '60s portrayed in the poster collage of Nehru jackets, bell bottoms, and flower children. What was history to a 10-year-old was only yesterday to several of the teachers, who came bedecked with bandannas and pendants salvaged from their 'hippie' days.

The last shift of children had an up-to-date menu of French bread pizzas or steak subs, which they munched to the strains of pop rock. They served themselves a tossed salad and corn, strawberries and mandarin oranges; selected chocolate, whole, or lowfat milk; and topped it off with a fudgesicle or brownie. It was still a bargain at 85 cents.

"The key word is choice in today's menus," recited Andre, one of the student hosts. "Fast foods have changed our eating habits," he added, introducing the collage of pictures, sayings, and menus his classmates had gathered to create the '80s image.

"This last group probably enjoyed their meal most," says school food director Nancy Stiles. "The food is more familiar to them. But even with the less popular 1946 and 1966 menus, we matched our usual 75-percent participation. This means the children value the lunchroom for activities as well as for the food."

## Activities part of ongoing program

Nutrition education is a focus of many lunchroom activities, and it is here that Stiles has put her personal stamp on the last decade of the lunch program in Hampton's three schools.

Because in many families both parents work, today's youngsters make



Costumes, decorations, and presentations added to the festivities at Marston Elementary's school lunch anniversary celebration. Several teachers, who grew up in the 1960's, dressed as "hippies."

more of their own food choices, she says. "More than ever, they need to know about good nutrition and how food and exercise affect their health."

To meet this need, Stiles developed a series of week-long mini-courses in nutrition. The children who hosted the special cafeteria program were the last of six classes of fourth graders to complete the course.

As hosts for the day, they dished out the entrees and tidied up the tables. With considerable poise, they used exhibits to share with their schoolmates the lessons they had learned during the week.

Brian used Billie, a cutaway plastic model of the human torso, to trace the path of food through the digestive system.

Pointer in hand, Rebecca explained the six major groups of nutrients printed on another display.

"The mini-course proves that the food service program doesn't have to stand alone but can be linked to the rest of the curriculum," Stiles says. "When teachers and food service staff cooperate, the cafeteria becomes a place to learn and a fun place to be."



## Many teachers use nutrition materials

Although the nutrition lessons fit most readily into the science curriculum, teachers can expand and adapt the material to other subject areas. For instance, a language teacher might assign a composition on a nutrition topic, and an art teacher might choose food themes.

Rosemary Buia, the teacher whose fourth graders helped plan and prepare the anniversary program, says she coordinates studies of the human body with the nutrition lessons.

"The children learn about food groups and the digestive system along with the other body functions, such as respiration. They learn about nutrients and minerals—what they do and where they come from.

"The last 2 days, we focus on what

makes a good meal in terms of nutrition, color, and texture. When we talk about snacks, Nancy Stiles brings something like raw turnip with dip and asks the children to guess what it is. It's a way of exposing them to different types of food," Buia explains.

Each class applies what it has learned by planning a meal for their schoolmates. Stiles gives them a choice of food to vote on. "Our class was the only one to offer three different menus because we combined the end of the nutrition education series with our anniversary celebration," says Buia.

## Celebration ended with special cake

No birthday celebration is complete without a cake, and the festivities at Marston Elementary were no exception.

To finish off the day's events, Stiles had two kinds of cake—an artificial tiered birthday cake rimmed with lights and crowned with a little red schoolhouse, and real cakes she had baked for the occasion.

Iced with the words "40 Years of School Lunch," the real cakes disappeared without a trace as the last of the children carried their empty trays to the kitchen. "Wicked good," they said, echoing the words of the 1986 collage.

For more information, contact:

Nancy Stiles  
Food Service Director  
Hampton School District  
Marston Way  
Hampton, New Hampshire 03842  
Telephone: (603) 926-8708

article and photos  
by Wini Scheffler

# Michigan Districts Get More for Less Buying Cooperatively

What is the biggest problem for school food service directors?

"Determining quality," says Vera Jehnsen, former food service director from Oakland County, Michigan. For nearly 25 years, Jehnsen has been involved with a food service cooperative that serves 20 to 25 school districts in Oakland County. "Selecting the best product for the best price is the goal of the cooperative," she says.

An interesting aspect of Oakland County's cooperative is that participating districts bid for food as a group but purchase individually. The arrangement not only gives individual school districts more purchasing power, it also gives school lunch managers valuable experience in evaluating products and purchasing.

## Four cooperatives now work together

Oakland County was the first food cooperative of its kind in southeastern Michigan. Since 1965, three neighboring counties—Macomb, Genesee, and Wayne—have followed Oakland's lead and set up similar cooperatives. While each of the cooperatives operates in-

dependently, they work together on developing specifications and evaluating food products through what is called the Quad County Purchasing Committee.

The committee, as Genesee County food service consultant Gloria Bourdon explains, is a logical extension of the cooperative buying concept. "Prior to 1981, each cooperative was going through the same product evaluation process, asking the same companies to provide the same samples. We decided we could have one product evaluation and simplify the process."

The committee includes the school food service consultants from each of the four counties, two local food service directors from each county, and industry representatives. Although industry representatives are not required to attend all committee meetings, they do actively participate in writing specifications, setting up evaluation sessions, and putting together workshops.

Committee members make up a list of the most often used food products, evaluate the products against specifications, tally the amounts needed by participating schools, and then three

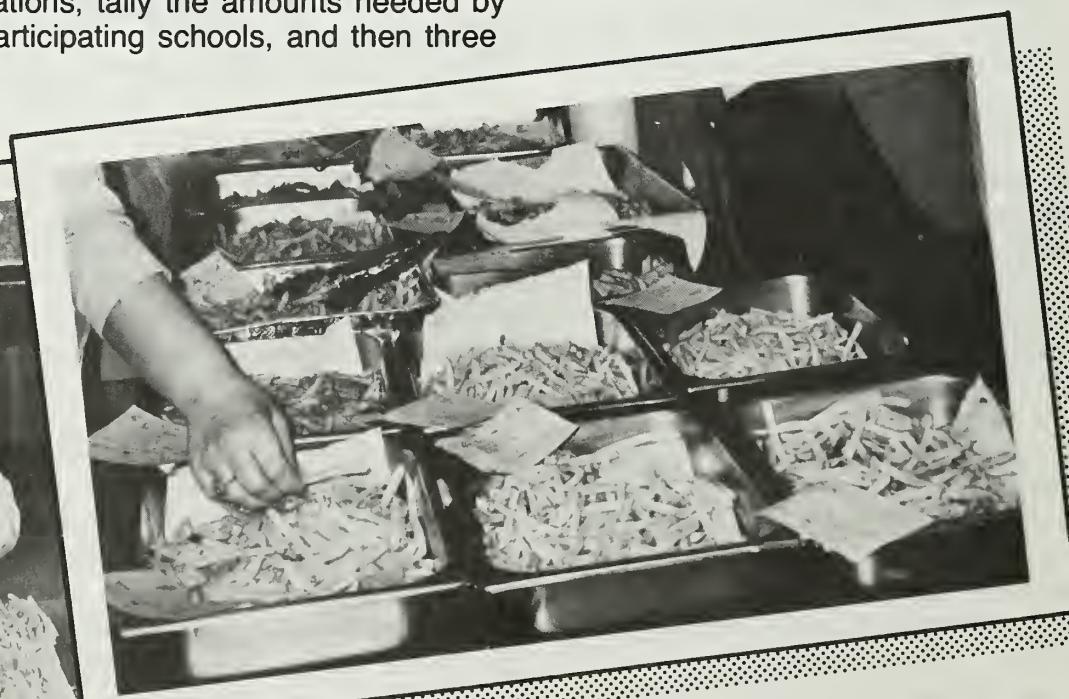
times a year put out bid proposals to the suppliers. Suppliers have access to product ratings and are given 2 to 4 weeks to send back their bids. The cooperatives award the bids, but the schools order individually.

## Foods evaluated in careful process

"To make the bidding process effective," says Bourdon, "the purchasing committee writes specifications that spell out exactly what the buyer wants. The buyer must determine if the product meets specifications through a product analysis, referred to as cutting, sampling, evaluating, or testing, depending on the type of product involved."

During product analysis, foods available from different food vendors are compared for flavor, color, uniformity, absence of defects, sugar content, consistency, and yield weight. "Without good specifications and product analysis, it is difficult for a school to purchase food that meets program needs," explains Bourdon.

Before the purchasing committee was set up, each county had its own 2-day product analysis with representatives from participating schools testing the samples.



This spring at a Wayne County high school, the cooperatives tested 36 types of french fries. Students, school lunch workers, and industry representatives took part in the test.

"The way we work now is not all that different," says Chacella Russell, Macomb County food service consultant. "The evaluation is done in a day, but the committee spends a great deal of time setting up and later tabulating results. There are more people involved now. In addition to representatives from the schools, we work extensively with industry."

"We operate one product evaluation and each county shares the results. We are not duplicating efforts asking the same vendors for test products. And vendors are willing to give us more information and more samples because they know there are potentially large sales involved."

After the evaluation, bid proposals are sent to the suppliers. Suppliers have the opportunity to know how their product rated with others being considered by the cooperatives. Each cooperative has its own bids and awards contracts to the two or three best companies that will agree to deliver minimum amounts needed by schools.

When schools want to order food, they place their orders directly with one of these suppliers. Because of the evaluations and the carefully worded specifications developed by the committee, school lunch managers know they will be getting a good quality product at a reasonable cost.

### Cooperatives offer many advantages

"There are lots of advantages to cooperative purchasing," says Russell. "Small districts can get the latest information on food products, and they can get better quality for better prices. Often food service directors in the smaller districts do not have training in purchasing, nor do they have the time to do extensive evaluations on their own."

As Russell explains, it's not cost effective for small districts to do extensive evaluations, and it can also be difficult for them to get vendors to participate. "Companies do not devote the time to small orders that they do to large ones," she says.

"We like the way our cooperatives are set up because while the bidding process is centralized, schools still have flexibility in ordering and arranging for deliveries," she adds.

Originally, most of the foods the cooperatives bid on were canned goods, such as canned fruits and vegetables, and prepared sauces. Today, there is greater variety, reflecting changing student tastes and new food technology.

For example, because french fries and chicken nuggets are popular items on school lunch menus, the purchasing committee decided to work on specifications and evaluation procedures for these two frozen products.

In a special project this past spring, 36 different types of french fries were evaluated for flavor, texture, appearance, and color. Twenty-four home economics students, 36 school lunch workers, and 12 industry representatives participated in the test, which was held at Wayne County's Northville High School.

The process was similar to other evaluations. First, the french fries were counted and checked for length and broken pieces, then prepared according to manufacturer's directions. They were weighed for yield, evaluated for acceptability, and rated as good, very good, or excellent in each of several categories.

### Students' reactions were important

Getting students' reactions was an important part of the test. "Kids don't always use the same criteria as adults in judging food," says Barbara Wilson, Wayne County food service consultant. "They come up with some surprising reasons for choosing a particular product, and they tend to like what is closest to what they get in the fast food restaurants.

"For example, they will tell you that even though thicker fries taste more 'potatoey,' they like the smaller pieces because when their friends walk by and take some, they will have more



left. Kids are kids. We have to consider the reality of the way they live."

Students and adults tasted the french fries together in an initial test, then the adults were called back to evaluate how the products held up after several minutes on the serving line. This is important because french fries served in schools are not always eaten immediately.

Following the test, summaries of student and adult evaluations were shared with food service directors and industry representatives. This is done routinely after evaluations.

#### **Committee's work includes training**

Participating in evaluations is one way school food service managers can learn more about products and sharpen their buying skills. The cooperatives offer more formal training opportunities as well, both on their own and together.

For example, the purchasing committee has an annual workshop for multi-unit directors. The workshop provides new information on purchasing procedures, rules, and specifications. This is accomplished through keynote speakers, small work groups, product comparisons, industry exhibits, and presentations.

"Helping schools get the best product for the best price has always been the goal of our cooperative," says Barbara Wilson. "Working together, we're doing that by sharing the knowledge, expertise, and experience of the four consultants, school food service representatives, and representatives from industry.

"We have developed specifications we can live with. We share common problems and draw upon each other for solutions. Each group involved has a commitment and a reward."

For more information, contact:

Barbara Wilson  
Food Service Consultant  
Wayne County Intermediate  
School District  
33500 Van Born Road  
Wayne, Michigan 48184  
Telephone: (313) 467-1300

article by Mary Jane Getlinger  
photos by Vera Jehnson

## **Minnesota Computer Student Solves A Lunch Dilemma**

"There has to be a better way to count kids in a lunch line!" Those were the words of Ortonville, Minnesota, superintendent Burton Nypen when he filled in for his secretary so she could be treated to lunch downtown on Secretary's Day 8 years ago.

Nypen had to punch more than 350 cardboard tickets for hungry, squirming youngsters at Knoll Elementary School. He also had to take care of students who had forgotten their cards, keep the line moving smoothly, and keep a tally of how many children paid full price, reduced price, or got their lunches free.

"It was impossible," says Nypen. "I did a horrible job!"

At about the same time, the Minnesota Department of Education reviewed Ortonville's food service operation and recommended that more accurate recordkeeping be done.

That was when Curt Johnson, an outstanding Ortonville computer student, came to the rescue. In the fall of 1978, Nypen asked Johnson if he could design a computer program to make school lunch recordkeeping simpler and more accurate.

Things worked together. The Minnesota Council on Quality Education awarded the Ortonville Schools a grant to fund innovative projects, and they used part of it to develop a food service accountability system.

#### **Used a portable computer first**

Johnson began by designing a program for the Apple II computer. As a first step, each student was issued an identification card with his or her name and number. Then, a portable computer terminal was set up in the lunchroom.

As the students moved through the line, the secretary typed in their identification numbers and listed the types of lunch they received. The computer kept track of the lunch fee while preserving the anonymity of students receiving free and reduced-price

meals. This system worked fairly well, but it was easy to make an error in entering students' identification numbers.

When Curt Johnson graduated from Ortonville High School in 1979, the school district hired him to continue working with computer systems. A year later, he became Ortonville's technology coordinator and decided to make some changes.

"When bar code scanners became available for use with microcomputers," he says, "we decided to modify our program. We modified a Hewlett Packard bar code scanner for the Apple II."

A bar code scanner is a device that uses light to read the thickness of vertical bars and then translates what it has read into letters and numbers. Bar code scanners come in a number of different forms and are commonly seen at grocery stores that have computerized their inventory and check-out systems.

The scanner proved to be easy, quick, and more accurate but it still required that a computer be available in the lunchroom each day. Not only was moving the computer into the lunchroom a difficult task, it was also hard to keep the computer from being banged, jarred, and jostled, and there were problems keeping it functioning properly.

#### **Looked for a better approach**

Johnson saw ways to improve his system and set off in search of a bar scanner that would be separate from the computer and small enough to easily carry to the lunchroom to collect data that would later be transferred to a stationary terminal. Johnson found a commercial model, but the \$1600 price tag was prohibitive since grant money had by then run out.

In May 1985, Johnson put his talents into action again and decided to build his own bar code scanner. "I ordered parts, put them together, redesigned them a few times, and came up with a

4- by 7-inch box that weighs about 2 pounds," he says. The new equipment cost under \$700 and was ready for the 1985-86 school year.

The equipment is compatible with IBM computer systems. In addition to a wand, the bar code scanner has a small keyboard so if students forget their identification cards, the numbers can be looked up on a printout and entered manually. To discourage frequent forgetfulness, however, students must go to the back of the lunch line to be processed manually.

If a student tries to use his or her card a second time during a meal period, a warning light goes on. The box also has a small screen which shows the students' balance. If an account is not paid up, another warning light goes on.

"It is a simpler way to keep accurate records," says secretary Elnor Benkowski, who records daily lunch data. "We know exactly who ate what kind of meal."

The system keeps the daily food service count, which shows how many meals were served at full price, reduced price, or free to participating children and how many meals were served to adults. The system also keeps track of daily cash receipts. It can record up to 1,100 student records per building, and building totals can be combined to give complete food service reports.

#### **Also helpful in other ways**

Billing is also simpler with the new system. Ortonville students can pay for their lunches on a weekly basis or their parents can be billed at the end of the month. The computer keeps track of students' lunch accounts and generates statements that are mailed to parents for billing.

A big benefit of the system is that it's easy to use, something that has not gone unnoticed by Superintendent

Nypen, who was recently called on again to help out during lunch hour. "It was no problem like it had been a few years ago when I tried to punch tickets," he says.

Thanks to the ingenuity of one of its former students, Ortonville has not only found an easy and accurate way to count kids in a lunch line, but has streamlined recordkeeping and billing as well. A number of Minnesota schools have expressed interest in the system, and the district hopes to interest other schools across the country.

For further information, contact:

Curt Johnson  
Ortonville Schools  
Box 247  
Ortonville, Minnesota 56278  
Telephone: (612) 839-6181

*article by Mary Jane Getlinger  
photos by Ortonville Schools*

Ortonville technology coordinator Curt Johnson is pictured here using the bar code scanner he designed to simplify school lunch accounting. When students present their cards, he scans the proper meal code with a special wand.



# Pasta Bar Is A Student Favorite At Cathedral High

When Frances Ziter, food service director of Cathedral High School in Springfield, Massachusetts, set up a pasta bar in the school dining room, many of her colleagues warned her that the cost would be phenomenal.

"Thanks to donated government commodities, the opposite is true," she says. "The pasta bar actually helps us stay within our budget and offer a wider variety of foods."

Cathedral High School is a private school that draws its 2,029 students from 31 towns and cities in Massachusetts and Connecticut. The Cathedral school food service also handles menu planning, finances, and some food preparation for Our Lady of Hope, an elementary school with an

enrollment of 403.

The popular pasta bar is one of the changes that have enabled Ziter and her staff of 23 to achieve a fully self-supporting food service that is popular with students.

"We cater to the tastes of our students just as any restaurant seeks to please its customers," she says. Ziter pleases her customers by offering foods they like, keeping prices low, and practicing good public relations.

## Students offered variety of choices

"If it's meatloaf, it must be Tuesday," could have been true under the once-traditional cycle menu which Ziter believes is unnecessary and monotonous. Instead of using a fixed and

recurring menu, she plans a month's meals with an eye on seasonal purchases, available commodities, and special events.

To satisfy as many tastes as possible, the Cathedral School dining room has four different serving lines. In addition to a standard hot meal, there is a fast food line that features such entrees as hamburgers, hot dogs, cold cut grinders (the New England term for subs), and roast beef and grilled cheese sandwiches. Other options are the salad bar and, on alternating weeks, the pasta or health food bar.

On a typical day recently, students could choose from nine different meals that met the USDA meal pattern, or they could buy items a la carte. The lines moved swiftly, giving diners more time to enjoy their meals in the light and surprisingly quiet dining room.

Sixty-three percent of the students buying lunch chose the USDA meal. Counting those who purchased a la carte items, the kitchen served around 90 percent of the student body.

Pasta, salad, and health food bars add variety to Cathedral's food service, which offers students a variety of hot and cold foods for lunch.



Menus for the month are posted in each home room. "We want students to be aware of the variety of choices they have," says Ziter. "We encourage their ideas, too. Recently, we offered parmesan chicken at the suggestion of a student. When we introduce a new item, the cooks always go out and ask students how they like it."

"Very few people choose the same line every day. Some of the girls who want to lose weight choose salads frequently, and sometimes the coach recommends a light meal for boys who have athletic practice right after lunch. These extra options keep our participation high."

The pasta bar, introduced 2 years ago, is a favorite choice of many students. Typical entrees served from the hot food cart include macaroni or spaghetti, which students can top with meat or spicy tomato sauce.

The pasta bar is offered only every other week because of the work involved in cooking fresh pasta. Because the timing is precise and the pasta is not overcooked, any leftovers can be used the following day in the salad bar.

#### Commodities help hold costs down

Federal cash and commodity assistance allow Ziter to offer lunches to students at a low cost of 75 cents.

"Commodities help us hold costs down," Ziter says, offering an example from a lunch recently served from the pasta bar. "The pasta, ground beef-and-tomato sauce, cheese sticks, salad dressing, and dinner rolls were all or in part donated."

A number of foods used for the pasta bar are processed under contract, using donated ingredients such as cheese, oil, and flour. Some of the processed items occasionally used to add variety to the pasta bar are tortellini, manicotti, lasagna, ravioli, and macaroni or shells with cheese.

Commodities help with other menus as well. Recent salad bar selections included pork salad from donated canned meat, macaroni salad, commodity cheese and peanuts, and salad dressing made with donated oil.

"We plan our menus to take advantage of the commodities available," Ziter says. "The government helps us



use less familiar items by supplying recipes and information on the number of servings in a package or carton. We ordered donated figs for the first time recently, and the accompanying recipe for a fig bar cookie was well accepted.

"By saving in one area, we can absorb higher costs in another. For instance, we can buy more expensive items such as fruits and vegetables in season and even occasionally include a luxury item, such as strawberry shortcake, which the senior class asked for recently."

#### Students encouraged to become involved

Ziter enjoys involving the students in decisions about food. "It's good public relations," she says.

"Each year, senior class officers plan a week's menu. Usually, they choose favorite items from those we have been serving, although they also suggest new things. If we know ahead of time, we can budget for a few more expensive items."

"We also work with the home economics classes in bachelor living, and those students have to budget as well as plan the meals. When they visited our kitchen, many were surprised to find that most foods are prepared here."

In addition to noonday meals, the food service staff offers Cathedral students a breakfast bar. They also cater such school events as dances, parent orientation days in the fall, and an annual father-daughter banquet.

During Frances Ziter's 9 years as director, the school food program at Cathedral has changed greatly.

"Years ago," she says, "the serving

area was set up so that workers faced the wall as they ladled lunch onto each tray. Students picked up the filled trays from the end of a conveyor belt.

"Now, under the offer versus serve policy, students make their own choices and may omit one or two of the five items offered. They get to know by name the food service workers who are assigned to the same duty stations each day. It's friendlier and more personal. Daily contact also helps us respond to student tastes."

#### Always looking for new ideas

Keeping in contact with other food service directors is also important to Ziter. "I always keep my eyes open for new ideas," she says.

"A few years ago, several of the other local food service directors and I formed a group we called 'kitchens in training,' which met each month to share ideas. We learned as much from each other as from the speakers who addressed our meetings."

"I regularly attend meetings sponsored by the state and by the Massachusetts School Food Service Association, because I am always looking for ways to adapt creatively to change."

For more information, contact:

Frances Ziter  
Food Service Director  
Cathedral High School  
260 Surrey Road  
Springfield, Massachusetts 01118  
Telephone: (413) 782-5108

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by Wini Scheffler

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